This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS

1-25. (cancelled).

26. (original) A resonator for use in a marker in a magnetomechanical electronic article surveillance system, said resonator comprising:

a planar strip of an amorphous magnetostrictive alloy having a longitudinal axis and having a composition comprising at least iron and nickel and at least one element from the group consisting of Groups Vb and VIb of the periodic table, and being annealed at an elevated temperature while being subjected to a tensile force along said longitudinal axis so that said planar strip has an induced magnetic easy plane perpendicular to said longitudinal axis, and having a resonant frequency f_r when driven by an alternating signal burst in an applied bias field H, a linear B-H loop up to at least an applied bias field H of about 8 Oe, a susceptibility $|df_r/dH|$ of said resonant frequency f_r to said applied bias field H which is less than about 1200 Hz/Oe, and a ring-down time of the amplitude to 10% of its value after the signal burst ceases which is at least about 3 ms for a bias field where the amplitude 1 ms after said alternating signal burst ceases has a maximum.

27. (original) A resonator as claimed in claim 26 having a composition $Fe_aCo_bNi_cM_dCu_eSi_xB_yZ_z$, wherein a, b, c, d, e, x, y and z are in at%, M is at least one element from the group consisting of Mo, Nb, Ta, Cr and V, and Z is at least one element from the group consisting of C, P and Ge, and wherein *a* is between about 20

and about 50, *b* is less than or equal to about 4, *c* is between about 30 and about 60, *d* is between about 1 and about 5, *e* is between about 0 and about 2, *x* is between about 0 and about 4, *y* is between about 10 and about 20, *z* is between about 0 and about 3, and d+x+y+z is between about 14 and about 25, and a+b+c+d+e+x+y+z = 100.

28. (original) A resonator as claimed in claim 26 having a composition $Fe_aCo_bNi_cM_dCu_eSi_xB_yZ_z$, wherein a, b, c, d, e, x, y and z are in at%, wherein M is at least one element from the group consisting of Mo, Nb, and Ta, and Z is at least one element from the group consisting of C, P and Ge, and wherein *a* is between about 30 and about 45, *b* is less than or equal to about 3, *c* is between about 30 and about 55, *d* is between about 1 and about 4, *e* is between about 0 and about 1, *x* is between about 0 and about 3, *y* is between about 14 and about 18, *z* is between about 0 and about 2, and d+*x*+*y*+*z* is between about 15 and about 22, and a+b+c+d+e+x+y+z = 100.

29. (original) A resonator as claimed in claim 26 having a composition $Fe_aCo_bNi_cM_dCu_eSi_xB_yZ_z$, wherein a, b, c, d, e, x, y and z are in at%, M is at least one element from the group consisting of Mo, Nb. and Ta, and Z is at least one element from the group consisting of C, P and Ge, and wherein *a* is between about 20 and about 30, *b* is less than or equal to about 4, *c* is between about 45 and about 60, *d* is between about 1 and about 3, *e* is between about 0 and about 1, *x* is between about 0 and about 3, *y* is between about 14 and about 18, *z* is between about 0 and about 2, d+x+y+z is between about 15 and about 20, and a+b+c+d+e+x+y+z = 100.

30. (original) A resonator as claimed in claim 26 having a composition from the group consisting of $Fe_{33}Co_2Ni_{43}Mo_2B_{20}$, $Fe_{35}Ni_{43}Mo_4B_{18}$, $Fe_{36}Co_2Ni_{44}Mo_2B_{16}$,

$Fe_{36}Ni_{46}Mo_2B_{16}$, $Fe_{40}Ni_{38}Cu_1Mo_3B_{18}$, $Fe_{40}Ni_{38}Mo_4B_{18}$, $Fe_{40}Ni_{40}Mo_4B_{16}$, $Fe_{40}Ni_{38}Nb_4B_{18}$, $Fe_{40}Ni_{40}Mo_2Nb_2B_{16}$, $Fe_{41}Ni_{41}Mo_2B_{16}$, and $Fe_{45}Ni_{33}Mo_4B_{18}$, wherein the subscripts are in at% and up to 1.5 at% of B can be replaced by C.

31. (original) A resonator as claimed in claim 26 having a composition from the group consisting of $Fe_{30}Ni_{52}Mo_2B_{16}$, $Fe_{30}Ni_{52}Nb_1Mo_1B_{16}$, $Fe_{29}Ni_{52}Nb_1Mo_1Cu_1B_{16}$, $Fe_{28}Ni_{54}Mo_2B_{16}$, $Fe_{28}Ni_{54}Nb_1Mo_1B_{16}$, $Fe_{26}Ni_{56}Mo_2B_{16}$, $Fe_{26}Ni_{54}Co_2Mo_2B_{16}$, $Fe_{24}Ni_{56}Co_2Mo_2B_{16}$, wherein the subscripts are in at% and up to 1.5 at% of B can be replaced by C.

32. (original) A resonator as claimed in claim 26 wherein said planar strip has a width between about 1 mm and about 14 mm and a thickness between about 15 μm and about 40 μm.

33. (original) A marker for use in a magnetomechanical electronic article surveillance system, said marker comprising:

a resonator comprising a planar strip of an amorphous magnetostrictive alloy having a longitudinal axis and having a composition comprising at least iron and nickel and at least one element from the group consisting of Groups Vb and VIb of the periodic table, and being annealed at an elevated temperature while being subjected to a tensile force along said longitudinal axis so that said planar strip has an induced magnetic easy plane perpendicular to said longitudinal axis, and having a resonant frequency f_r when driven by an alternating signal burst in an applied bias field H, a linear B-H loop up to at least an applied bias field H of about 8

Oe, a susceptibility $|df_r/dH|$ of said resonant frequency f_r to said applied bias field H which is less than about 1200 Hz/Oe, and a ring-down time of the amplitude to 10% of its value after the signal burst ceases which is at least about 3 ms for a bias field where the amplitude 1 ms after said alternating signal burst ceases has a maximum;

a magnetized ferromagnetic bias element, which produces said applied bias field H, disposed adjacent said planar strip; and

a housing encapsulating said planar strip and said bias element.

34. (original) A marker as claimed in claim 33 wherein said planar strip is a first planar strip, and further comprising a second planar strip substantially identical to said first planar strip, said first planar strip being disposed in said housing in registration with said second planar strip adjacent said bias element.

35. (original) A marker as claimed in claim 33 wherein said resonator has a composition $Fe_aCo_bNi_cM_dCu_eSi_xB_yZ_z$, wherein a, b, c, d, e, x, y and z are in at%, M is at least one element from the group consisting of Mo, Nb, Ta, Cr and V, and Z is at least one element from the group consisting of C, P and Ge, and wherein *a* is between about 20 and about 50, *b* is less than or equal to about 4, *c* is between about 30 and about 60, *d* is between about 1 and about 5, *e* is between about 0 and about 2, *x* is between about 0 and about 4, *y* is between about 10 and about 20, *z* is between about 0 and about 3, and d+x+y+z is between about 14 and about 25, and a+b+c+d+e+x+y+z = 100.

36. (original) A marker as claimed in claim 33 wherein said resonator has a composition $Fe_aCo_bNi_cM_dCu_eSi_xB_yZ_z$, wherein a, b, c, d, e, x, y and z are in at%, wherein

M is at least one element from the group consisting of Mo, Nb, and Ta, and Z is at least one element from the group consisting of C, P and Ge, and wherein *a* is between about 30 and about 45, *b* is less than or equal to about 3, *c* is between about 30 and about 55, *d* is between about 1 and about 4, *e* is between about 0 and about 1, *x* is between about 0 and about 3, *y* is between about 14 and about 18, *z* is between about 0 and about 2, and d+*x*+*y*+*z* is between about 15 and about 22, and a+b+c+d+e+x+y+z = 100.

37. (original) A marker as claimed in claim 33 wherein said resonator has a composition $Fe_aCo_bNi_cM_dCu_eSi_xB_yZ_z$, wherein a, b, c, d, e, x, y and z are in at%, M is at least one element from the group consisting of Mo, Nb. and Ta, and Z is at least one element from the group consisting of C, P and Ge, and wherein *a* is between about 20 and about 30, *b* is less than or equal to about 4, *c* is between about 45 and about 60, *d* is between about 1 and about 3, *e* is between about 0 and about 1, *x* is between about 0 and about 3, *y* is between about 14 and about 18, *z* is between about 0 and about 2, d+x+y+z is between about 15 and about 20, and a+b+c+d+e+x+y+z = 100.

38. (original) A marker as claimed in claim 33 wherein said resonator has a composition from the group consisting of $Fe_{33}Co_2Ni_{43}Mo_2B_{20}$, $Fe_{35}Ni_{43}Mo_4B_{18}$, $Fe_{36}Co_2Ni_{44}Mo_2B_{16}$, $Fe_{36}Ni_{46}Mo_2B_{16}$, $Fe_{40}Ni_{38}Cu_1Mo_3B_{18}$, $Fe_{40}Ni_{38}Mo_4B_{18}$, $Fe_{40}Ni_{40}Mo_4B_{16}$, $Fe_{40}Ni_{38}Nb_4B_{18}$, $Fe_{40}Ni_{40}Mo_2Nb_2B_{16}$, $Fe_{41}Ni_{41}Mo_2B_{16}$, and $Fe_{45}Ni_{33}Mo_4B_{18}$, wherein the subscripts are in at% and up to 1.5 at% of B can be replaced by C.

39. (original) A marker as claimed in claim 33 wherein said resonator has a composition from the group consisting of $Fe_{30}Ni_{52}Mo_2B_{16}$, $Fe_{30}Ni_{52}Nb_1Mo_1B_{16}$,

$Fe_{29}Ni_{52}Nb_1Mo_1Cu_1B_{16}$, $Fe_{28}Ni_{54}Mo_2B_{16}$, $Fe_{28}Ni_{54}Nb_1Mo_1B_{16}$, $Fe_{26}Ni_{56}Mo_2B_{16}$, $Fe_{26}Ni_{54}Co_2Mo_2B_{16}$, $Fe_{24}Ni_{56}Co_2Mo_2B_{16}$, wherein the subscripts are in at% and up to 1.5 at% of B can be replaced by C.

40. (original) A marker as claimed in claim 33 wherein said planar strip has a width between about 1 mm and about 14 mm and a thickness between about 15 μm and about 40 μm.

41. (original) A magnetomechanical electronic article surveillance system comprising:

a marker comprising a resonator comprising a planar strip of an amorphous magnetostrictive alloy having a longitudinal axis and having a composition comprising at least iron and nickel and at least one element from the group consisting of Groups Vb and VIb of the periodic table, and being annealed at an elevated temperature while being subjected to a tensile force along said longitudinal axis so that said planar strip has an induced magnetic easy plane perpendicular to said longitudinal axis, and having a resonant frequency f_r when driven by an alternating signal burst in an applied bias field H, a linear B-H loop up to at least an applied bias field H of about 8 Oe, a susceptibility $|df_r/dH|$ of said resonant frequency f_r to said applied bias field H which is less than about 1200 Hz/Oe, and a ring-down time of the amplitude to 10% of its value after the signal burst ceases which is at least about 3 ms for a bias field where the amplitude 1 ms after said alternating signal burst ceases has a maximum, a magnetized ferromagnetic bias element, which produces said applied

bias field H, disposed adjacent said planar strip, and a housing encapsulating said planar strip and said bias element, a transmitter for generating said alternating signal burst to excite said marker for causing said resonator to mechanically resonate and to emit a signal at said resonant frequency f_r;

a receiver for receiving said signal from said resonator at said resonant frequency f_r;

a synchronization circuit connected to said transmitter and to said receiver for activating said receiver to detect said signal at said resonant frequency f_r after the signal burst ceases; and

an alarm, said receiver triggering said alarm if said signal at said resonant frequency f_r from said resonator is detected by said receiver.

42. (original) A magnetomechanical electronic article surveillance system as claimed in claim 41 wherein said resonator has a composition $Fe_aCo_bNi_cM_dCu_eSi_xB_yZ_z$, wherein a, b, c, d, e, x, y and z are in at%, M is at least one element from the group consisting of Mo, Nb, Ta, Cr and V, and Z is at least one element from the group consisting of C, P and Ge, and wherein *a* is between about 20 and about 50, *b* is less than or equal to about 4, *c* is between about 30 and about 60, *d* is between about 1 and about 5, *e* is between about 0 and about 2, *x* is between about 0 and about 4, *y* is between about 10 and about 20, *z* is between about 0 and about 3, and d+x+y+z is between about 14 and about 25, and a+b+c+d+e+x+y+z = 100.

43. (original) A magnetomechanical electronic article surveillance system as claimed in claim 41 wherein said resonator has a composition $Fe_aCo_bNi_cM_dCu_eSi_xB_yZ_z$,

wherein a, b, c, d, e, x, y and z are in at%, wherein M is at least one element from the group consisting of Mo, Nb, and Ta, and Z is at least one element from the group consisting of C, P and Ge, and wherein *a* is between about 30 and about 45, *b* is less than or equal to about 3, *c* is between about 30 and about 55, *d* is between about 1 and about 4, *e* is between about 0 and about 1, *x* is between about 0 and about 3, *y* is between about 14 and about 18, *z* is between about 0 and about 2, and d+*x*+*y*+*z* is between about 15 and about 22, and a+b+c+d+e+x+y+z = 100.

44. (original) A magnetomechanical electronic article surveillance system as claimed in claim 41 wherein said resonator has a composition $Fe_aCo_bNi_cM_dCu_eSi_xB_yZ_z$, wherein a, b, c, d, e, x, y and z are in at%, M is at least one element from the group consisting of Mo, Nb. and Ta, and Z is at least one element from the group consisting of C, P and Ge, and wherein *a* is between about 20 and about 30, *b* is less than or equal to about 4, *c* is between about 45 and about 60, *d* is between about 1 and about 3, *e* is between about 0 and about 1, *x* is between about 0 and about 3, *y* is between about 14 and about 18, *z* is between about 0 and about 2, d+x+y+z is between about 15 and about 20, and a+b+c+d+e+x+y+z = 100.

45. (original) A magnetomechanical electronic article surveillance system as claimed in claim 41 wherein said resonator has a composition from the group consisting of $Fe_{33}Co_2Ni_{43}Mo_2B_{20}$, $Fe_{35}Ni_{43}Mo_4B_{18}$, $Fe_{36}Co_2Ni_{44}Mo_2B_{16}$, $Fe_{36}Ni_{46}Mo_2B_{16}$, $Fe_{40}Ni_{38}Cu_1Mo_3B_{18}$, $Fe_{40}Ni_{38}Mo_4B_{18}$, $Fe_{40}Ni_{40}Mo_4B_{16}$, $Fe_{40}Ni_{38}Nb_4B_{18}$, $Fe_{40}Ni_{40}Mo_2Nb_2B_{16}$, $Fe_{41}Ni_{41}Mo_2B_{16}$, and $Fe_{45}Ni_{33}Mo_4B_{18}$, wherein the subscripts are in at% and up to 1.5 at% of B can be replaced by C.

46. (original) A magnetomechanical electronic article surveillance system as claimed in claim 41 wherein said resonator has a composition from the group consisting of $Fe_{30}Ni_{52}Mo_2B_{16}$, $Fe_{30}Ni_{52}Nb_1Mo_1B_{16}$, $Fe_{29}Ni_{52}Nb_1Mo_1Cu_1B_{16}$, $Fe_{28}Ni_{54}Mo_2B_{16}$, $Fe_{28}Ni_{54}Nb_1Mo_1B_{16}$, $Fe_{26}Ni_{56}Mo_2B_{16}$, $Fe_{26}Ni_{54}Co_2Mo_2B_{16}$, $Fe_{24}Ni_{56}Co_2Mo_2B_{16}$, wherein the subscripts are in at% and up to 1.5 at% of B can be replaced by C.

47. (original) A magnetomechanical electronic article surveillance system as claimed in claim 41 wherein said planar strip has a width between about 1 mm and about 14 mm and a thickness between about 15 μm and about 40 μm.

48-50. (cancelled).